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I N S E C T P E S T S U R V E Y B U L L E T I N

Vol. 21 November 1, 1941 No. 9

THE MORE IMPORTANT RECORDS FOR OCTOBER

White grubs were reported as doing considerable damage in Indiana and Illinois.

Wireworms were reported as injuring potatoes in New England, onions in Minnesota, and wheat in Oklahoma.

Fall armyworms were abnormally abundant in New England and the Middle Atlantic States, with severe damage reported from Mississippi, Missouri, and Texas. They were also reported from Nebraska.

The European corn borer was reported from sections of Maryland and Virginia, which are in the vicinity of Washington, D. C. This appears to be the first record from this locality. It was also reported for the first time from eight new counties in southern Virginia. This insect was seriously prevalent in Ohio and parts of Indiana. In Illinois about half of the counties of the State are infested. It was also recorded for the first time from three additional counties in Wisconsin.

The chinch bug was migrating to hibernation quarters in Indiana, Illinois, and Missouri.

The southwestern corn borer caused considerable damage in southwestern Kansas and parts of Oklahoma.

The sorghum webworm was very destructive to feterita and other grain sorghums in Oklahoma and parts of Texas, and was also reported from Indiana.

The velvetbean caterpiller was generally reported from the South Atlantic States and the Gulf region.

An increase in the populations of the San Jose scale was reported from the East Central States.

Weather conditions have been favorable for the development of Comstock's mealybug and high populations of overwintering eggs in parts of Virginia and Ohio.

The green stinkbug has almost completely destroyed tomatoes, beans, and peas over the southern half of Alabama. Vetches, Austrian winter peas, and crimson clover very seriously damaged on about 200,000 acres in the Willamette Valley, Oreg. by garden slugs.

The potato tuber worm is very abundant and doing considerable damage to potatoes on the Eastern Shore of Virginia. It was also reported from parts of Louisiana.

The cabbage looper occurred in outbreak numbers in eastern Virginia and in damaging numbers in parts of Texas and Oklahoma.

The sweetpotato weevil was reported from Hutchinson County, Kans., this being the first record for that State.

Indications are that large populations of boll weevils will go into hibernation over most of the Cotton Belt.

The cotton leaf worm during the second week in the month appeared in New England and during the third week in the month throughout the East Central States and in Nebraska.

Pines have been severely infested by the European pine shoot moth in areas in Connecticut, New York, New Jersey, and Massachusetts.

The boxelder bug was unusually numerous throughout the Middle Atlantic, East Central, and West Central States, being particularly troublesome because of entering houses.

The screwworm was reported as unusually abundant in parts of Indiana, Illinois, Mississippi, and Arizona, and first recorded in Montana.

THE MORE IMPORTANT INSECT RECORDS IN CANADA FOR AUGUST-SEPTEMBER

Grasshopper surveys in August revealed light to moderate infestations over the greater part of the agricultural area in Manitoba. In general, damage was very light, although some late crops in the Red River Valley and Carmen areas suffered severely. The clear-winged grasshopper was found to have extended its range into northern areas of the Province. In southern sections the lesser migratory and two-striped grasshoppers were predominant. In Saskatchewan, where the dominant species is the lesser migratory grasshopper, there was a high survival and marked increase of grasshoppers this season over much of the Province, but particularly in the west and west-central regions. Considerable damage to later grain crops occurred, and flax suffered heavily in some areas. In Alberta, the lesser migratory grasshopper, although greatly reduced as compared with 1940, was present in small numbers over practically the whole cultivated area of the southern part of the Province. Heavy damage along the margins of wheatfields occurred in a number of localities, and head dropping reduced the yield 1 or 2 bushels per acre in some areas.

Increased abundance of the field cricket was reported in Manitoba and Saskatchewan.

The wheat stem sawfly occurred generally in the Prairie Provinces. In Manitoba, some light to moderate infestations occurred, but were held in

check by the present crop rotation systems. Losses were heavy, however, in Saskatchewan and Alberta. In the former Province damage was widespread and severe, averaging as high as 10 percent in some areas and 15 to 20 percent in others. In Alberta, losses were general and more severe than anticipated, some fields showing a reduction of yield of 3 to 10 bushels per acre. Surveys also showed severe losses in several northern areas where such damage had not previously been recorded.

Wheat crop losses due to Say's stinkbug were more extensive in Alberta than in any season since 1938.

Damage by the wheathead armyworm estimated at 0.5 to 5 percent occurred in west-central Saskatchewan, affecting chiefly wheat seeded on stubble land.

Considerable damage to pastures and field crops by white grubs was reported in southern and south-central Ontario.

The beet webworm was widespread in the Peace River district and throughout the Prairie Provinces. In southern Alberta a small percentage of the beet crop was destroyed and yields were reduced on some 10,000 acres.

The usual reports of conspicuous abundance of the imported cabbage worm were received from various points in the Dominion.

Flea beetles were noted as injurious to crops in the Annapolis Valley, Nova Scotia, and in southern sections of Quebec, Alberta, and in the Victoria district, British Columbia.

The codling moth infestation in the Berwick district, Nova Scotia, was unusually heavy, and for the first time evidence of a second generation was obtained. In Norfolk County, Ontario, first-brood adults were taken as late as September 8. Injury in this area varied from a trace in well-sprayed orchards to as much as 25 percent. Infestations were heavy in southwestern Ontario, but less severe than in 1940, in spite of favorable weather conditions. In the Okanagan Valley, British Columbia, where the most serious outbreak on record had been feared, damage from late codling moth attack was less than expected. This was associated with an unseasonably cool and wet September.

Second-generation oriental fruit moth twig infestation in the Niagara district, Ontario, was only 3.4 percent, compared with 24.3 percent in 1940.

There has been a general reduction in the numbers of the European spruce sawfly in the Maritime Provinces and Quebec, east of the St. Lawrence. The species was recorded for the first time in Newfoundland on August 8.

G E N E R A L F E E D E R S

GRASSHOPPERS (Acrididae)

Michigan. E. I. McDaniel (October 28): Grasshopper eggs are scarce in most sections. Adults of Melanoplus mexicanus Sauss. are still flying in the northern part of the State.

FIELD CRICKET (Gryllus assimilis F.)

Texas. W. C. Maxwell (October 25): Infestation in the vicinity of Robstown has continued throughout the month, with rather large numbers attracted to lights.

WHITE GRUBS (Phyllophaga spp.)

Connecticut. J. P. Johnson (October 22): After doing much damage during the season the larger species of grubs have gone into hibernation, being found from 4 to 24 inches below the surface. One smaller species was still feeding in the upper 2 inches of soil, but approximately one-third of the grubs were from 4 to 6 inches below the surface.

Indiana. J. J. Davis (October 13): Reported as doing considerable damage to pine seedlings in the Federal-State forest nursery at Washington.

Illinois. W. P. Flint (October 23): P. rugosa Melsh. and P. profunda Blanch. have destroyed many acres of corn, soybeans, and pasture in northern and central Illinois. In a number of cases this damage is unusual because the eggs were laid in fields when they were in soybeans. In some areas in central Illinois nearly all the damage is confined to fields that were in soybeans in 1940, when the eggs of the Brood C grubs, which were causing most of the damage, were laid. P. rugosa is the species most abundant in fields that were in soybeans in 1940. (Det. by W. H. Anderson.)

WHITE GRUBS (Cyclocephala spp.)

Connecticut. J. P. Johnson (October 21): C. borealis Arrow generally infested and severely damaged 2 acres in a cemetery at Davis, 4 acres of lawn in South Norwalk, and about two-thirds of the fairways and rough on an 18-hole golf course in Westport. Damage to lawns in Fairfield also.

Indiana. P. Luginbill and H. R. Painter (October 24): C. immaculata Oliv. has been destructive to lawns at La Fayette.

J. J. Davis (October 22): Cyclocephala sp. has been very destructive to lawns in many sections of the State.

JAPANESE BEETLE (Popillia japonica Newm.)

Connecticut. J. P. Johnson (October 23): Grubs were still feeding in the upper 2 inches of turf, and control measures are being carried out in southern and central Connecticut. Injury was especially severe in the metropolitan areas of New Haven and Hartford.

ORIENTAL BEETLE (Anomala orientalis Wtrh.)

Connecticut. J. P. Johnson (October 24): Damaged many lawns in Hamden, New Haven, and West Haven this fall. Grubs are 4 to 8 inches below the surface and general feeding has ceased.

A SCARABAEID (Anomala undulata Melsh.)

Ohio. G. Still (July 21): Specimens found feeding on grape leaves in Stark County, just east of Canton. Collected on June 10 after a heavy rain. A few days later all beetles disappeared. Leaves showed heavy surface feeding; not sufficient damage to cause permanent injury to vines. On July 17 it was observed that beetles had disappeared and injured leaves turned brown.

WIREWORMS (Elateridae)

Maine. J. H. Hawkins (October 10): The wheat wireworm (Agriotes mancus Say) seriously injured potatoes planted in first-year sod land and in fields where cultivation has not destroyed couch grass in central Maine.

Vermont. H. L. Bailey (October): More abundant than usual, causing considerable damage to potatoes, particularly in Washington County.

Mississippi. C. Lyle, et al. (October 24): Injury to sweetpotatoes was reported from Alcorn, Chickasaw, Lee, Monroe, and Tippah Counties. Some injury was reported from the southwestern counties, where the damage was said to be less severe than that of last year.

Minnesota. A. A. Granovsky (October 21): Wireworms were quite troublesome in lowlands, especially to onions.

Oklahoma. F. A. Fenton (October 23): A. mancus Say reported as damaging wheat in Alfalfa County.

CUTWORMS (Phalaenidae)

Louisiana. E. M. Livingstone (October 15): Fed considerably on young camellias in hotbeds in New Orleans during the first 10 days in October.

Missouri. L. Haseman (October 25): Since the middle of October, in central Missouri, there has been a rather heavy flight of moths of the greasy cutworm (Agrotis ypsilon Rott.) and smaller numbers of one or two other species.

Ohio. T. H. Parks (October 25): Larvae of the yellow-striped armyworm (Prodenia ornithogalli Guen.) were feeding on spinach and tomatoes in the greenhouse at the University at Columbus early in October. Damage severe enough to require control measures.

Nebraska. D. B. Whelan (October 21): Spotted cutworm (Agrotis badinotis Grote) was observed feeding on green tomatoes in Lancaster County on October 19.

General. E. E. Russell (October): In fields heavily damaged by the pale western cutworm (Agrotis orthogonia Morr.) last spring; in Texas County, Okla.; in Deaf Smith, Oldham, Potter, Armstrong, Carson, Gray, Roberts, Hutchinson, Moore, Hansford, and Ochiltree Counties, Tex.; and in Curry and Quay Counties, N. Mex., careful soil diggings showed that there was an extremely light moth emergence and no evidence of survival in sufficient numbers to constitute a threat to crops next spring.

Washington. C. F. Doucette (October): Severe damage by the variegated cutworm (Peridroma margaritosa Haw.) was noted on tomatoes in a greenhouse at Sumner the latter part of the month. Some leaves had been eaten to the main ribs, and green fruits had been gouged out. Larvae collected in the soil were full grown.

ARMYWORM (Cirphis unipuncta Haw.)

Missouri. L. Haseman (October 25): Moths have been unusually abundant around decaying fruit in central Missouri since the middle of October.

Colorado. M. A. Palmer (October 22): Taken in light trap at Fort Collins from June 17 to September 18. Most abundant July 2 to latter part of month. Fairly abundant.

FALL ARMYWORM (Laphygma frugiperda A. & S.)

Maine. A. E. Brower (October): A number of moths appeared at light at Augusta late in September.

New York. L. A. Carruth (October 25): More abundant than usual on Long Island and has been more apparent because of the extended growing season. Similar situation has developed in up-State and western New York.

Virginia. H. G. Walker (October 24): Continued to be destructive during October in many fields of spinach and peas in the Norfolk area.

C. R. Willey (October): Very abundant and caused a great deal of damage to late corn in the eastern part of the State during September.

Mississippi. C. Lyle, et al. (October 24): Severe damage reported to 400 acres of oats in Copiah County on October 23. Caused some damage to velvetbeans and kudzu in the Meridian area and was tunnelling in

ripening tomatoes at State College early in October.

Missouri. H. E. Brown (October 25): Rather serious continuous infestation since late in September, especially over the central section of the State. Includes both maturing larvae and adult moths.

Nebraska. D. B. Whelan (October 21): Larvae were observed feeding on green tomatoes in Lancaster County on October 19.

Texas. R. K. Fletcher (October 21): What appeared to be the fall armyworm was present on carrots at Winter Haven on October 21.

W. C. Maxwell (October 25): Severe infestation on a lawn at Bishop on September 25, with 40 to 50 larvae per square foot. Larvae were feeding on Bermuda grass, sandburs, and to some extent on St. Augustine grass.

SALT-MARSH CATERPILLAR (Estigmene acraea Drury)

Texas. W. C. Maxwell (October 25): General throughout Nueces County, parts of some cottonfields being defoliated. Present on many different host plants.

C E R E A L A N D F O R A G E - C R O P I N S E C T S

WHEAT

HESSIAN FLY (Phytophaga destructor Say)

Ohio. T. H. Parks (October 25): No serious infestation exists in the main wheat crop. Volunteer wheat in stubble fields is now infested with both puparia and larvae, ranging from half to full grown, apparently the result of an early emergence of adults.

Nebraska. H. D. Tate (October 21): Heavy emergence occurred during the latter part of September and the early part of October in the southeastern part of the State, and there was extensive egg deposition on volunteer and early sown wheat.

CORN

EUROPEAN CORN BORER (Pyrausta nubilalis Hbn.)

Maine. J. H. Hawkins (October 8): Continues to spread and intensify the infestation in central Maine. First-generation borers in the fields examined are mostly in the stalks below the ear, and many are in the stalk close to the soil surface.

Vermont. H. L. Bailey (October): Less abundant than in 1940. Survey of 14 counties showed that State average was 16.6 per hundred plants, as compared with 39.6 for 1940. Less borer damage to ears of sweet corn reported from canning factories than for several years.

New York. L. A. Carruth (October 25): Late infestations of the second generation were relatively light in eastern New York late in August and in September.

Maryland. F. F. Dicke (October 14): Larvae appeared to be abundant in a corn nursery at Beltsville.

C. M. Packard (October 9): Numerous specimens collected on dahlias and on corn in a garden in northeast Washington. (Det. by C. Heinrich.)

Virginia. W. A. Baker (October 24): Additional first records as of October 20 were received from Charles City, Fairfax, Henrico, King George, Loudoun, Prince William, Stafford, and Surry Counties.

Ohio. E. W. Mendenhall (October 8): Numerous in northwestern Ohio, especially in Ottawa County. Damage more severe in the northern section of the State.

Indiana. J. J. Davis (October 22): Appeared in more noticeable and destructive numbers than in any previous year. Reports of damage were received from as far south as Madison on the Ohio River, and as far west as Lafayette. There was a very marked increase in the abundance of moths and larvae in the first generation. Increase of adults, as shown by light-trap catches, of the second generation (or moths which produced the second-generation worms) was much less marked than the year before and the second-generation population of worms was also less than anticipated, owing no doubt to several factors, including drought, which caused considerable firing of the corn, making it undesirable for egg laying or larval development.

W. A. Baker (October 20): First record submitted from Bartholomew County.

Illinois. W. P. Flint (October 23): Nearly half of the counties in the State are infested, the infestation extending entirely across the State from the Indiana to the Iowa line. Counties infested for the first time this year are Stephenson, Boone, Carroll, Ogle, La Salle, Lee, Bureau, Putnam, Marshall, Woodford, Peoria, Tazewell, Logan, De Witt, Macon, Piatt, Christian, Shelby, Moultrie, Douglas, Edgar, Coles, Cumberland, Clark, Crawford, and Lawrence.

Wisconsin. W. A. Baker (October 24): First records as of October 20 reported from Green, Langlade, Marathon, and Sauk Counties.

SUGARCANE BORER (Diatraea saccharalis F.)

Texas. W. C. Maxwell (October 25): Infestation continues in dwarf maize, with at least a part of the infestation being centered in the stem a short distance below the head. Moths have been rather numerous during the month.

CORN EARWORM (Heliothis armigera Hbn.)

Florida. H. C. Young (October 21): Specimens of caterpillars found feeding on vetch at Svea.

Ohio. T. H. Parks (October 25): Troublesome over entire State, feeding on market and home-garden sweet corn until the end of the season and attempting to mature on the dry kernels. Other crops damaged were lima beans, chrysanthemums near Cleveland, and greenhouse tomatoes near Cleveland and at Columbus.

Indiana. J. J. Davis (October 22): Unusually abundant. Observations were made in Daviess County, in southern Indiana, where every ear was infested.

Illinois. W. P. Flint (October 23): Caused some damage in soybeans during the latter part of September.

Missouri. H. E. Brown (October 25): Moths are still numerous and laying eggs. Larvae in all stages are abundant in late sweet corn in the dough stage and in mature popcorn.

Texas. W. C. Maxwell (October 25): Rather numerous in heads of grain sorghum, one to four specimens per head being found.

Utah. G. F. Knowlton (October 8): Injury to canning corn was severe in many fields at Springville, Tremonton, Brigham, Corinne, Honeyville, Deweyville, and Spanish Fork. Blackbirds reportedly ate many larvae from infested areas in Box Elder County.

CHINCH BUG (Blissus leucopterus Say)

Indiana. C. Benton (October 24): Migration from corn to hibernation quarters started around September 7, with migratory flights from September 7 to 11 and 15 to 25, October 6 to 8, 13 to 14, and 20 to 21. By October 21 over 95 percent of the bugs had left the corn, apparently for hibernation. A scattering of bugs still occurred around foxtail and other grasses in cornfields, in heavy-growth volunteer wheat, and in the rankest stands of early sown rye.

Illinois. W. P. Flint (October 23): Owing to the fact that corn matured early, chinch bugs had nearly all gone into winter quarters before the heavy rains in the north-central part of the State which occurred during October, greatly lessening the effect of the rains in reducing the numbers of this insect.

Missouri. P. C. Stone (October 25): About 90 percent of the late-maturing adult bugs in the central and northern parts of the State have left the few remaining green cornfields for their winter hibernating quarters. Weather conditions prevented any large general fall flight anywhere in the State. A nabid, Pagasa fusca Stein, common in cornfields, was noted to kill in laboratory from 3 to 13 adult bugs a day during the middle of the month.

SOUTHWESTERN CORN BORER (Diatraea grandiosella Dyar)

Kansas. H. R. Bryson (October 11): Caused considerable injury to corn in the southwestern part of the State, as much as 25-percent injury being reported in some fields. Reported as far north as Minneapolis, Ellis, and Ellsworth.

Oklahoma. F. A. Fenton (October 23): Reported from Woodward and Lamont.

GREEN PLANT BUG (Chlorochroa uhleri Stal)

North Dakota. J. A. Munro (August 14): Large numbers were feeding on corn at Hague.

ALFALFA

SWEETCLOVER WEEVIL (Sitona cylindricollis Fahr.)

Illinois. W. P. Flint (October 23): Adults are very abundant in sweetclover fields in the northern half of the State.

North Dakota. H. S. Telford and C. Wester (October 23): Found in recently harvested sweetclover seed from a seed warehouse in Fargo on September 19.

RED TURNIP BEETLE (Entomoscelis adonidis Pallas)

Minnesota. A. G. Ruggles and assistants (September 14): Specimens submitted with report that it is abundant in alfalfa and sweetclover fields around Greenbush, Roseau County.

ALFALFA CATERPILLAR (Colias eurytheme Bdv.)

Utah. G. F. Knowlton (October 10): Adults were moderately abundant at Willard and Perry, and were observed at Farmington.

PEA APHID (Macrosiphum pisi Kltb.)

Maine. J. H. Hawkins (October 20): Abundant in a few fields of clover in central Maine, and present in some numbers generally. Overwintering eggs are being laid.

Utah. G. F. Knowlton (October 30): The pea aphid is very abundant on succulent alfalfa in some fields in the Kanesville-South Ogden area.

CLOVER LEAFHOPPER (Aceratagallia sanguinolenta Prov.)

Missouri. H. E. Brown (October 25): Rather heavy flight in central Missouri during third week in October.

GRASS

A SKIPPER (Atalopedes campestris Bdv.)

Texas. R. K. Fletcher (October 21): Caterpillars were reported as injuring grazing land in Runnels County on October 1, and in Hays County on August 15.

SORGHUM

SORGHUM WEBWORM (Celama sorghiella Riley)

Indiana. J. J. Davis (October 17): Specimens of larvae reported as damaging feterita near Madison. (Det. by C. Heinrich.)

Oklahoma. F. A. Fenton (October 23): Reported from Roff, Grandfield, Heavener, Chickasha, Duncan, and Stillwater, and has caused widespread damage to grain sorghums throughout a large part of the State.

Texas. W. C. Maxwell (October 25): Practically all fields of grain sorghum show damage. Infestation was found in Egyptian wheat, with the larvae feeding in the lower part of the head where it was partially enclosed by the top sheath.

VELVETBEAN CATERPILLAR (Anticarsia gemmatilis Hbn.)

South Carolina. F. F. Bondy and C. F. Rainwater (October 18): Severe injury to young vetch is being caused by what is presumed to be the soybean caterpillar on the Experiment Station at Florence. Young plants are completely stripped of every leaf and the stems are being attacked.

Georgia. T. L. Bissell (October 16): Few larvae on kudzu and on small volunteer cowpeas.

Florida. J. R. Watson (October 22): One of the heaviest flights ever noticed occurred in the last week of September and the first week in October. Caterpillars severely damaged velvetbeans and peanuts, and caused light damage to cowpeas and soybeans.

Alabama. J. M. Robinson (October 22): Abundant over central and southern Alabama, the last generation being highly parasitized by tachinid eggs. In some areas they are attacked by fungus.

Mississippi. E. W. Dunnam, et al. (October 18): This species is attacking alfalfa, which is just coming up in Washington County. There are from one to three small larvae per plant. Older alfalfa is being destroyed by an older brood, and all fields, regardless of age of plants, are heavily infested. Caterpillars pupated about 2 weeks ago and now thousands of moths are present.

T. F. McGehee (October 24): Continue to injure velvetbeans and soybeans. In Harrison County some soybean fields were reported as ruined for hay.

WILD RICE

RICE STALK BORER (Chilo plejadellus Zinck.)

Delaware. H. L. Dozier (September 15): One to three borers were found in most stalks of wild rice examined. A large stand of acres of wild rice on the Cherry Island marsh at Wilmington had gone down flat in muck, and it is believed that this species, together with the drought, was responsible for this extensive condition.

F R U I T I N S E C T S

SHOT-HOLE BORER (Scolytus rugulosus Ratz.)

Mississippi. L. J. Goodgame (October 24): Injury to peach trees reported from Monroe County.

FLATHEADED APPLE TREE BORER (Chrysobothris femorata Oliv.)

Nebraska. H. D. Tate (October 21): Reported as attacking elm and fruit trees in Stanton County on September 21.

SAN JOSE SCALE (Aspidiotus perniciosus Comst.)

Virginia. C. R. Willey (October): Building up very materially.

Ohio. E. W. Mendenhall (October 8): Serious on apple fruit in orchards in the vicinity of Newark, Licking County.

Indiana. J. J. Davis (October 22): Definitely on the increase.

Illinois. S. C. Chandler (October 25): New brood observed during the week in apple and peach orchards in southern Illinois. Infestation very severe generally.

Mississippi. C. Lyle, et al. (October 24): Injuring untreated trees in northeastern counties, the Meridian area, and Jackson, Tallahatchie, and Yalobusha Counties.

WHITE PEACH SCALE (Aulacaspis pentagona Targ.)

Maryland. E. N. Cory (October 20): Very destructive on flowering cherry.

Virginia. C. R. Willey (October): Building up very materially.

H. G. Walker (October 24): Very abundant in the Norfolk area.

Georgia. T. L. Bissell (October 21): Peach grower at Zebulon found four trees in his orchard encrusted. Trees have been treated three successive winters for this scale.

CODLING MOTH (Carpocapsa pomonella L.)

Ohio. T. H. Parks (October 25): Average infestation of blemished fruit, including stings, is 5.66 percent, as compared with 6.17 percent in 1940, the present year's average having been based on inspection of 101 treated commercial orchards. A third generation of larvae was largely responsible for a serious infestation which occurred in Lawrence County, in the southern part of the State, where in some cases as high as 50 percent of the fruit was worny or stung.

Illinois. W. P. Flint (October 23): Late broods were extremely heavy, and unusually large numbers of larvae have gone into hibernation. Weather conditions during October permitted late-brood worms to reach full maturity.

Michigan. R. Hutson (October 25): Surveys at Grand Rapids, Paw Paw, St. Joseph, Farmington, and Pontiac indicate a late upsurge in codling moth activities at these places.

Missouri. L. Jenkins (October 25): In northeastern Missouri 57 percent of the third-brood larvae had left the apples by October 5. Forty-one percent of those remaining were less than half grown. Over the State as a whole there was greater damage from third-brood larvae than for several years. Band records indicate a high population of overwintering larvae, late varieties showing 50 times greater carry-over of worms than earlier varieties.

Wisconsin. C. L. Fluke (October 21): Second brood more numerous than usual in apple-producing sections of the State.

Utah. C. J. Sorenson (October): Damage was unusually heavy in many apple and pear orchards in Box Elder, Cache, and Utah Counties where fruit set was light and treatment inadequate.

APPLE MAGGOT (Rhagoletis pomonella Walsh)

Michigan. R. Hutson (October 25): Damage has been observed at Detroit, Kalamazoo, Grand Rapids, and Ionia.

Wisconsin. C. L. Fluke (October 21): One of the most severe outbreaks of recent years reported from all sections, including Dane, Door, Jefferson, Kenosha, Ozaukee, Sheboygan, Sauk, Bayfield, and Richland Counties.

WOOLLY APHIDS (Eriosoma spp.)

Mississippi. N. L. Douglass (October 24): The woolly apple aphid (E. lanigerum Hausm.) was observed on young trees in one locality in Yalobusha County.

Tennessee. G. M. Bentley (October 15): Both the top and ground forms of E. americanum Riley are occurring on apples. Observations indicate a predominance of the top, or air form.

Missouri. L. Haseman (October 25): E. lanigerum seems to be less abundant than usual in central Missouri around pruning scars and other injuries on apple trees.

COMSTOCK'S MEALYBUG (Pseudococcus constocki Kuw.)

Virginia. G. J. Haeussler (October 27): In Albemarle County oviposition by females of the third generation was first observed on October 1, about 2½ weeks earlier than females of the corresponding generation were observed to oviposit last year. Weather conditions have been very favorable for development, resulting in the build-up of a high population of overwintering egg masses in many locations. Feeding stages and adult females are still present in considerable numbers in most of the infested orchards. Observations in Clarke and Frederick Counties on October 13 and 14 show that the population of overwintering egg masses now developing appears to be considerably greater than last year.

Ohio. E. W. Mendenhall (October 22): Found on catalpa trees in Columbus and causing some injury.

EUROPEAN RED MITE (Paratetranychus pilosus C. & F.)

Connecticut. P. Garman (October 24): Considerable increase in apple orchards during the last 2 months. Heavy deposit of winter eggs noticeable everywhere.

ORIENTAL FRUIT MOTH (Grapholitha molesta Busck)

Georgia. T. L. Bissell (September 29): Terminals of Photinia serrulata at Experiment have been killed since August 12, although they did not seem to be infested at that time.

Mississippi. C. Lyle, et al. (October 24): Twigs of a shrub injured by larvae were recently received from Bolivar County. Reported as injuring peach twigs in the Meridian area, the northeastern counties, and Tallahatchie County. Large numbers of Photinia twigs have been killed at State College.

Missouri. C. Wingo (October 25): Last moth taken in bait jars on September 29. Very little damage to peach twigs in September in the southeastern section of the State. Some damage to apples was noted during the same month. Average moth population throughout this section is much lower than in previous years.

PEACH BORER (Conopia exitiosa Say)

Maryland. O. I. Snapp (October 7): Very heavy infestation at Beltsville, as many as 47 borers having been found in a single 10-year-old peach tree.

Michigan. R. Hutson (October 25): Borers of all sizes have been observed at Paw Paw, South Haven, and Fennville.

Mississippi. C. Lyle, et al. (October 24): Reported as causing damage to peach trees in the Meridian area, the northeastern counties, and in Tate, Tallahatchie, and Yalobusha Counties.

PLUM CURCULIO (Conotrachelus nenuphar Hbst.)

Georgia. O. I. Snapp (October 20): All adults have left peach orchards at Fort Valley for places of hibernation, and hibernating population is heavier than that of an average year. Only one of many hibernating females dissected on October 16 contained eggs.

A LEAFHOPPER (Homalodisca triquetra F.)

Florida. J. R. Watson (October 22): Specimen sent from Pensacola, where it was reported as severely damaging young sprouts of peach trees.

PEAR

PEAR PSYLLID (Psylla pyricola Foerst.)

Washington. J. F. Cooper (October 21): Specimens collected in Okanogan and Douglas Counties. (Det. by P. W. Oman.)

PEAR LEAF BLISTER MITE (Eriophyes pyri Pgst.)

Indiana. J. J. Davis (October 22): Abundant in southern Indiana early in the month.

CHERRY

BLACK CHERRY APHID (Myzus cerasi F.)

Montana. H. B. Mills (October 18): Returning migrants more abundant on sweet cherries on East Shore, Flathead Lake, than in several years. Moderate damage.

QUINCE

UNICORN CATERPILLAR (Schizura unicornis A. & S.)

Mississippi. D. W. Grimes (October 24): A number of larvae found on quince in Bolivar County on October 9.

PLUM

RUSTY PLUM APHID (Hysteroneura setariae Thos.)

Minnesota. A. A. Granovsky (October 21): Very abundant.

CURRANT

CURRANT APHID (Capitophorus ribis L.)

Minnesota. A. A. Granovsky (October 21): Very abundant.

GRAPE LEAFHOPPER (Erythroneura comes Say)

Nebraska. H. D. Tate (October 21): Reported as damaging woodbine and grapevines in Franklin and Cherry Counties early in the month.

PECAN

FALL WEBWORM (Hyphantria cunea Drury)

Georgia. O. I. Snapp (October 20): Infestation on pecan trees at Fort Valley, in central Georgia, has not been as heavy as usual.

HICKORY SHUCK WORM (Laspeyresia caryana Fitch)

Mississippi. C. Lyle, et al. (October 24): Specimens on pecan were received from Leake County. Rather heavy infestations reported from Holmes County.

WALNUT CATERPILLAR (Datana integerrima G. & R.)

Mississippi. C. Lyle, et al. (October 24): Injuring pecan trees in Adams County early in October. Rather abundant at State College.

PECAN WEEVIL (Curculio caryae Horn)

Texas. W. S. Price (October 9): Specimens from pecans sent from Gustine.

APHIDS (Aphiidae)

Georgia. O. I. Snapp (October 17): Infestation of giant hickory aphid (Longistigma caryae Harr.) is still heavy on pecan at Fort Valley. Observations today revealed that a number of limbs on trees in yards had been killed.

Mississippi. M. L. and D. W. Grimes (October 24): Infestations of the black pecan aphid (Melanocallis caryaefoliae Davis) were observed in the Meridian and Durant districts.

OBSCURE SCALE (Chrysomphalus obscurus Comst.)

Mississippi. D. W. Grimes (October 24): Found in most pecan orchards in the southern half of the Mississippi-Yazoo Delta.

CITRUS

POTATO LEAFHOPPER (Empoasca fabae Harr.)

California. R. S. Woglum (October): Green leafhoppers are moving in to central California citrus groves in the same general areas and to the same extent as at this season in past years. Groves along the western edge of the Citrus Belt are the first to be affected. Damage has not been serious and has been confined to navel groves which are generally located near field crops, particularly cotton.

PAPAYA

BEET ARMYWORM (Laphygma exigua Hbn.)

Florida. A. N. Tissot (September 10): Specimens received of moth reared from larvae collected on July 23 at Orlando on papaya leaves. (Det. by J. F. G. Clarke.)

DATE PALM

RED DATE SCALE (Phoenicococcus marlatti Ckll.)

California. P. Simmons (October 11): The red date scale is plentiful on date palm leaf bases of the 1939 growth at Indio, Riverside County. More recent leaf bases were not examined.

T R U C K - C R O P I N S E C T S

CUCUMBER BEETLES (Diabrotica spp.)

Florida. J. R. Watson (October 22): D. balteata Lec. was reported as inflicting considerable damage on all truck crops at Bradenton.

Maine. J. H. Hawkins (October 20): Striped cucumber beetles (D. vittata F.) are feeding on immature squash left in fields at Orono, and are very abundant for this time of year.

Indiana. J. J. Davis (October 22): Spotted cucumber beetle (D. duodecimpunctata F.) was damaging the flowers of chrysanthemum in greenhouses at La Fayette the middle of October.

Missouri. L. Haseman (October 25): D. vittata present in about usual numbers around fruit and late cucurbits in central Missouri. D. duodecimpunctata has been more abundant than usual in central Missouri, feeding on various flowers, including dahlias and roses, and also feeding in injured late apples.

Minnesota. A. A. Granovsky (October 21): D. vittata is always present in numbers; D. duodecimpunctata is scarce and much less important.

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BLISTER BEETLES (Epicauta spp.)

Mississippi. C. Lyle, et al. (October 24): Adults of the southern striped blister beetle (E. lemniscata F.) caused some injury to turnips in one locality of Oktibbeha County. Adults of the margined blister beetle (E. marginata F.) were received from one locality in Oktibbeha County, where they were feeding on clematis.

LESSER CORNSTALK BORER (Elasmopalpus lignosellus Zell.)

Georgia. T. L. Bissell (October 16): Commonly infesting old cowpea plants that are ceasing to bear and small volunteer plants on recently plowed ground. More numerous on beans and cowpeas than on corn at Experiment.

Texas. S. E. Jones (October 21): Found on spinach at Winter Haven on October 21.

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

Missouri. L. Haseman (October 25): Unusually large number on late vegetables, flowers, and fruits through central Missouri during the latter part of October.

SOUTHERN GREEN STINKBUG (Nezara viridula L.)

Mississippi. C. Lyle, et al. (October 24): Adults and nymphs were received from Harrison County on October 13, where they were collected from soybeans. Also reported as injuring turnips in George County.

GREEN STINKBUG (Acrosternum hilare Say)

Alabama. J. M. Robinson (October 22): Reported on tomatoes, beans, and peas over the southern half of the State. Has caused almost complete failure of crops and has transmitted virosis in tomatoes especially.

GARDEN SLUG (Agriolimax agrestis L.)

Oregon. B. G. Thompson (October 23): Very serious in vetches, Austrian winter peas, and crimson clover, covering approximately 200,000 acres in the Willamette Valley.

POTATO

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

Delaware. L. A. Stearns (October 8): Specimens of infested potatoes received from Dover, where they were stored. Investigation revealed no field infestation.

Virginia. H. G. Walker (September 23): No infested potato plants found in survey of several fields made last spring. Recent survey of fall potato fields in Princess Anne County and on the Eastern Shore of Virginia indicated that tuber worms were in practically all of the

fields and that several fields near Onley and Accomac, both in Accomac County, were severely infested, whereas it was difficult to find them in several fields near Temperanceville and New Church, also in Accomac County. Most of the worms had pupated at the time the survey was made.

C. R. Willey (October 1 and 2): Very abundant and doing considerable damage, together with the drought, to several potato fields on the Eastern Shore.

Louisiana. W. E. Anderson (October 2): Survey made this year throughout the State showed that there were 6 infested properties in St. James Parish, 3 in St. John the Baptist Parish, 58 in Terrebonne Parish, 54 in Lafourche Parish, and 1 in Iberville Parish.

TOMATO PINWORM (Keiferia lycopersicella Busck)

Missouri. J. A. Denning (October 21): During the first week of September an infestation was reported from Manchester Road in Kirkwood, St. Louis County. Infestation appears to have originated in a greenhouse where tomatoes are being produced by liquid culture. Reported by owner as present for first time on tomato plants. Other infestations found a mile away from the greenhouse.

CORN EAR WORM (Heliothis armigera Hbn.)

New York. L. A. Carruth (October 25): Number of serious infestations have developed in various sections of New York State. Infestations found on celery and lettuce on Long Island, owing to absence of appreciable acreages of late sweet corn. Similar situation has developed in up-State and western New York, where the ear worm is much more abundant than usual.

Maryland. L. P. Ditman (October 22): Caused considerable damage to late tomatoes, lima beans, and string beans in Prince Georges County, and to a number of other garden vegetables, such as cabbage and eggplant, which are not usually attacked.

Virginia. L. W. Brannon (October 29): Severely damaged bean pods in many fields of fall snap and lima beans in the Norfolk area and on the Eastern Shore. In one field of untreated snap beans 27 percent of the pods were damaged.

Mississippi. M. L. Grimes (October 24): Some damage to tomatoes noted in the Meridian area.

Nebraska. D. B. Whelan (October 21): Larvae were observed feeding on green tomatoes in Lancaster County on October 19.

Utah. G. F. Knowlton (October 8): Canners reported that 8 to 10 percent of the tomato fruits brought in had been infested.

TOMATO WORM (Protoparce sexta Johan.)

Mississippi. C. Lyle, et al. (October 24): One adult was received from Humphreys County. Infestations have been reported as fairly heavy in Alcorn, Lee, Monroe, and Union Counties.

Texas. W. C. Maxwell (October 25): Some damage is being done to a small acreage of tomatoes near Robstown.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Tennessee. G. M. Bentley (October 22): Very common in untreated areas in Cumberland, Putnam, Roane, Scott, Morgan, and Fentress Counties.

POTATO PSYLLID (Paratrioza cockerelli Sulc)

Utah. G. F. Knowlton (October 18): Few cases of injury observed this season.

A BEETLE (Phyrdenus bullatus Csy.)

Arizona. R. A. Flock (September 2): Seriously attacking tomatoes at Benson, Cochise County.

BEANS

MEXICAN BEAN BEETLE (Epilachna varivestis Muls.)

Alabama. J. M. Robinson (October 22): Moderately abundant in Auburn on October 20.

Mississippi. C. Lyle, et al. (October 24): Specimens received from Montgomery County on September 16. Recently reported for the first time from Holmes County. Injuring late beans in the Meridian area and in Alcorn, Benton, Choctaw, Lafayette, Marshall, Monroe, Panola, and Webster Counties.

South Dakota. H. C. Severin (September 30): Found in western part of State.

BEAN LEAF BEETLE (Cerotoma trifurcata Forst.)

Maryland. C. Z. Keller (September 18): Present in Princess Anne County.

Mississippi. C. Lyle (October 24): Adults were causing injury to snap beans in the Gulfport and Grenada districts, lima beans in Holmes County, and soybeans in the Grenada area.

POTATO LEAFHOPPER (Empoasca fabae Harr.)

Florida. J. R. Watson (October 22): Severely curled most of the bean leaves, especially in the north and central parts of the State.

BEAN LEAF ROLLER (Urbanus proteus L.)

Florida. J. R. Watson (October 22): Larvae very abundant in northern and central parts of the State.

BEAN THRIPS (Hercothrips fasciatus Perg.)

Utah. G. F. Knowlton (October 8): Generally abundant and injuring string beans in Davis County.

PEAS

PEA APHID (Macrosiphum pisi Kltb.)

Virginia. H. G. Walker (October 24): Has been very abundant in spots in peafields at Norfolk.

CABBAGE AND TURNIPS

IMPORTED CABBAGE WORM (Pieris rapae L.)

Maine. J. H. Hawkins (October 20): Generally affected late untreated cabbage in central Maine.

Virginia. H. G. Walker (October 24): Has been moderately abundant in some fields of crucifers at Norfolk and rather scarce in others.

S. B. Fenne (October 27): Causing severe damage to cabbage, collards, and kale in eastern Virginia. Much parasitization by fungus, bacteria, and insects.

Mississippi. D. W. Grimes and N. D. Poets (October 24): Reported as damaging collards in Holmes County and cabbage in Copiah, Claiborne, and Lincoln Counties.

Missouri. L. Haseman (October 25): Heavy late infestation has occurred through central Missouri, owing to prolonged mild weather into October.

SOUTHERN CABBAGE WORM (Pieris protodice Bdv. & Lec.)

Virginia. H. G. Walker (October 24): Larvae have been abundant enough to cause considerable damage in several collard fields in the Norfolk area and on the Eastern Shore of Virginia.

Mississippi. C. Lyle (October 24): Very abundant on turnips at State College.

CABBAGE LOOPER (Autographa brassicae Riley)

Virginia. S. B. Fenne (October 21): Causing severe injury generally in southwestern and eastern Virginia to cabbage, collards, and kale.

H. G. Walker (October 24): Outbreak more severe than ever before in eastern Virginia. Some fields of crucifers have been ruined and many others severely damaged.

Texas. W. C. Maxwell (October 25): Infestation on cabbage in Nueces County, with rather severe damage to some fields.

Colorado. M. A. Palmer (October 20): Most abundant in light trap at Colorado State College at Fort Collins from June 16 to 24, and taken up to August 21.

DIAMONDBACK MOTH (Plutella maculipennis Curt.)

Virginia. H. G. Walker (October 24): Larvae are becoming very abundant and troublesome in a great many fields of crucifers in the Norfolk area.

CABBAGE WEBWORM (Hellula undalis F.)

Virginia. H. G. Walker (October 24): Present but has not been abundant enough to cause any appreciable amount of damage in the Norfolk area.

Georgia. T. L. Bissell (October 1): Webbing and killing the tops of candytuft.

Mississippi. M. L. Grimes (October 24): Has done some damage to turnips in the Meridian area.

Texas. W. C. Maxwell (October 25): Infestation in some of the cabbage fields near Robstown, a small percentage of the plants being severely damaged.

APHIDS (Aphiidae)

Virginia. S. B. Fenne (October 27): Causing considerable damage generally to cabbage, kale, and brussels sprouts.

Missouri. L. Haseman (October 25): Turnips and cabbage are showing a light infestation in central Missouri.

HARLEQUIN BUG (Murgantia histrionica Hahn)

Maryland. J. Key (September 2): Present at Chaptico.

Mississippi. C. Lyle, et al. (October 24): Specimens were received from Claiborne County where they were feeding on cabbage, collards, and turnips. Reported as damaging collards and turnips in the Grenada and Meridian districts; also reported from Attala County.

California. R. E. Campbell (September 25): Numerous and breeding all summer on bladder-pod and wild mustard at San Juan Capistrano. As these host plants dried up the bugs began migrating. A cauliflower seedbed was infested and seriously damaged.

SQUASH

SQUASH BUG (Anasa tristis Deg.)

Missouri. L. Haseman (October 25): Present on late cucurbits in central Missouri. Numerous bugs matured around the middle of the month.

EGGPLANT

EGGPLANT LACEBUG (Gargaphia solani Heid.)

Mississippi. C. Lyle (October 24): Specimens received from Monroe County on September 21. Abundant at State College early in October.

SPINACH AND BEETS

HAWAIIAN BEET WEBWORM (Hymenia fascialis Cram.)

Virginia. H. G. Walker (October 24): Very abundant in early planted spinach at Norfolk during the month. Apparently large numbers built up on pigweed and lambsquarter during August and September, and then migrated to spinach as soon as it became available.

Texas. S. E. Jones (October 21): Present on beets at Winter Haven.

ONIONS

ONION THRIPS (Thrips tabaci Lind.)

Georgia. T. L. Bissell (October 1): Small seedlings of carnation are stunted and distorted by thrips. Possibly onion thrips, as wild onions in beds are also infested.

Utah. G. F. Knowlton (October 8): Caused injury to onions in several parts of Weber County during the year.

ONION MAGGOT (Hylemya antiqua Meig.)

Nevada. G. G. Schweis (October 22): Reported as having injured from 1 to 2 percent of the onion crop.

STRAWBERRY

STRAWBERRY CROWN BORER (Tyloderma fragariae Riley)

Mississippi. L. J. Goodgame (October 24): Specimens were found in the roots of strawberry plants in one locality in Alcorn County.

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Oregon. J. Davis (October 14): Damaged 5 acres of a 40-acre strawberry patch at Tigard.

SWEETPOTATO

SWEETPOTATO WEEVIL (Cylas formicarius F.)

Kansas. H. R. Bryson (October 5): Specimen received from Hutchinson. First record of its occurrence in the State.

Texas. C. A. Richmond (November 1): Causing serious damage to sweetpotatoes in Quemado Valley, Maverick County.

SWEETPOTATO LEAF ROLLER (Pilocrocis tripunctata F.)

Mississippi. M. M. High (October 24): Specimens were collected in sweetpotato field in Harrison County on October 6.

SWEETPOTATO HORNWORM (Herse cingulata F.)

Georgia. E. L. Bissell (October 31): Larvae were very abundant on young sweetpotato vines at Doerun, in Colquitt County, southwestern Georgia, on September 26. On September 30 the correspondent reported that larvae had disappeared. Moths have just emerged.

TOBACCO

POTATO TUBER WORM (Gnorimoschema operculella Zell.)

Georgia. M. Murphey, Jr. (October 4): Specimens collected in tobacco at Fitzgerald, Ben Hill County, on July 24.

Florida. F. S. Chamberlin (October 13): Specimens collected on tobacco at Quincy on July 8. (Det. by C. Heinrich.)

SUCKFLY (Dicyphus minimus Uhl.)

North Carolina. C. F. Stahl (September 29): Specimens collected on tobacco at Oxford on September 24. (Det. by H. G. Barber.)

C O T T O N I N S E C T S

BOLL WEEVIL (Anthonomus grandis Boh.)

Virginia and South Carolina. F. F. Bondy and C. F. Rainwater (October 25): Numerous in second-growth cotton in the eastern and central parts of the Carolinas and the southeastern part of Virginia. (November 1): Far less numerous in fields in Florence County where stalks have not been destroyed than would be expected. In last year's collection for the November 1 installation, a large number of weevils were newly emerged and had not fed sufficiently to put them in good condition for hibernation. This year no newly emerged weevils have been seen and all seem to be in good condition.

Georgia. P. M. Gilmer (October 18): Still present in large numbers in all fields in Tift and Berrien Counties showing squares or much foliage. There is a large amount of feeding but not many larvae present in squares. Cotton has ceased blooming because of the extensive feeding injuries. (October 25): Still numerous in most fields in Tift County.

Florida. C. S. Rude (October 25): Abundant in fields where cotton is still putting on squares. Parasites from Peru are being released in a heavily infested field at Gainesville.

Alabama. J. M. Robinson (October 22): Continue to feed on second growth of leaves and late square formation on cotton throughout the State.

Tennessee. G. M. Bentley (September 25): Light infestation in late top squares, with very little injury. Field at Millington, in Shelby County, showed highest infestation of punctured squares.

Mississippi. E. W. Dunnam, et al. (October 25): Concentrated in a few fields in Washington County where food is plentiful. Square examinations showed that weevil eggs were hatching in second-growth squares. Some larvae were found approximately one-third grown. Reports from an adjoining county indicated that no larvae could be found in second-growth squares. Most weevils found were near wooded areas in green cotton. (October 11): Much green foliage is present in Washington County for boll weevil food. Many squares are large enough for egg deposition, but many of them have been punctured and fed upon so that apparently no weevils will emerge.

Louisiana. R. C. Gaines, et al. (October 25): Not so numerous as at the same time last year.

Oklahoma. C. F. Stiles (October 31): Has decreased through most of the southeastern part of State during the last month, owing to complete defoliation of cotton stalks in many fields by the cotton leaf worm. A 30-minute examination in a field in Pottawatomie County on October 14 revealed only one weevil. This field was heavily infested during August.

Texas. K. P. Ewing, et al. (October 25): Abundant in McLennan, Falls, and Limestone Counties wherever squares and new growth are found.

W. C. Maxwell (October 25): Heavy infestation continues throughout the Coastal Bend section, with practically all of the young fruit badly infested.

COTTON LEAF WORM (*Alabama argillacea* Hbn.)

Massachusetts. A. I. Bourne (October 8): Reported from points around Fitchburg, in the northeastern part of the State, and reported generally throughout much of eastern Massachusetts.

L. E. Gibson (October 7): Thousands of adults were seen clustered around the electric lights at Greenfield and were matted on lighted store windows. First heavy flight seen in this section for many years.

Rhode Island. A. I. Bourne (October 8): Flights in Providence and vicinity reported over the radio.

Illinois. W. P. Flint (October 23): Very heavy flights occurred in central Illinois on nights of October 1 and 2.

Michigan. R. Hutson (October 25): Appeared at lights for the last month in the vicinity of Hale, Paw Paw, St. Joseph, Shelby, Grand Rapids, and Lansing.

Missouri. A. C. Burrill (September 18): Fifty moths entered a window at the capitol building in Jefferson City on September 16.

Nebraska. H. D. Tate (October 21): Specimens received from Hall County on September 24 with report that they were damaging ripe strawberries. Moths of this species were observed at lights on a number of occasions in Lancaster County during the latter half of October. Reported as present on one occasion in large numbers in Omaha, Douglas County.

Virginia. F. F. Bondy and C. F. Rainwater (October 25): Present in the southeastern part of the State, but very few fields were defoliated.

North Carolina and South Carolina. F. F. Bondy and C. F. Rainwater (October 25): Found throughout eastern and central parts of the Carolinas, but very few fields were defoliated. Around Florence defoliation was much heavier during the last 2 weeks than at any other time. Some fields are practically defoliated but parasitization of the pupae is very high. (November 1): Present in fields in Florence County where stalks are still standing; considerable defoliation during the week; largest population of any time during the season.

Georgia. P. M. Gilmer, et al. (October 18): Still present in occasional fields in Tift and Berrien Counties, but rather uncommon. (October 25): Few scattered worms are still to be found. No serious defoliation in the Tift County area and little serious ragging.

T. L. Bissell (October 22): Infestations reported during September from Sumter, Bullock, Pulaski, Polk, and Terrell Counties. Worms were abundant at Experiment on October 15, and from October 16 to 21 there were many moths at lights.

Florida. C. S. Rude (October 11): Defoliated many fields but became serious so late that defoliation did little or no damage. (November 1): New brood appeared in many fields that had been defoliated 6 weeks ago.

J. R. Watson (October 22): Defoliated most fields of cotton in the central part of the State.

Alabama. J. M. Robinson (October 22): Defoliated cotton throughout the State.

Tennessee. G. M. Bentley (October 18): Nearly all of the larvae have disappeared. Rather heavy infestation late in the season in the cotton-growing counties of western Tennessee; heavy defoliation in the middle and lower counties. Comparatively little damage was done, as the bolls were well developed, and only in late-planted cotton was there any loss in the development of top bolls.

Mississippi. C. Lyle, et al. (October 24): Light late infestations were reported from the Meridian area, and signs of feeding were observed in Humphreys County.

E. W. Dunnam, et al. (October 11): Many moths are present in nearly all fields in Washington County. A new brood appears to be hatching, as there are many very small larvae on cotton in some treated fields. No small worms have been noted on second growth following earlier infestations. (October 25): A few fields in Washington County have been completely stripped the second time.

Louisiana. R. C. Gaines, et al. (October 25): Some cotton in Madison Parish was defoliated or badly ragged during the past week. Found in most fields but not developing because nights are cool.

Oklahoma. C. F. Stiles (October 1): Defoliated from 80 to 95 percent of the cottonfields in the eastern half of the State. Approximately 50 percent have been defoliated in the extreme southwestern portion of the State. From Hobart north to the northern limits of the Cotton Belt, the defoliation ranges from none to 50 percent. Moths are present by the thousands in most of the fields on the west side of the State and eggs are numerous.

Texas. K. P. Ewing, et al. (October 25): Scattered specimens can be found in some localities in McLennan, Falls, and Limestone Counties.

L. W. Noble (October 25): Present at Presidio but not in sufficient numbers to defoliate the plants.

W. C. Maxwell (October 25): Many fields in the Coastal Bend section have been partially defoliated during the last month. Many moths now present.

Arizona. T. P. Cassidy and W. A. Stevenson (September 27): Heavy population was reported from practically all cotton-growing areas in the Santa Cruz Valley, with the exception of the Marana area, where treatment was given.

PINK BOLLWORM (Pectinophora gossypiella Saund.)

Texas. Jessie M. Harper (October 14): Inspection in Nueces County was discontinued, no specimens having been found for the season. During the season a total of 28 specimens was found in Cameron County and 3 in Hidalgo County.

L. W. Noble (October 18): Infestation counts for the first half of October were completed at Presidio. Larval populations per acre at 15-day periods from August 1 to October 15 show that the larval population was slightly lower than last year.

S. D. Smith (September 23): Specimen found on September 12 in gin trash at El Indio, Maverick County, which originated from the Quemado Valley in the same county.

Arizona. Jessie M. Harper (October 7): Only findings in the regulated area of Arizona have been at Glendale in Maricopa County.

COTTON APHID (Aphis gossypii Glov.)

South Carolina. F. F. Bondy and C. F. Rainwater (October): Abundant in all cotton in Florence County during the week ended November 1, and particularly on cotton that has sprouted from stalks that have been cut.

Georgia. P. M. Gilmer, et al. (October 18): Aphids are uncommon in Tift and Berrien Counties, only an occasional plant showing a few large-type forms.

Florida. C. S. Rude (October 11): Not numerous.

Mississippi. E. W. Dunnam, et al. (October 4): No large dark-form aphids were noted in cotton in Washington County during the week. Aphids generally scarce.

M. L. Grimes (October 24): Heavy infestations were observed in fields treated for boll weevils.

COTTON FLEA HOPPER (Psallus seriatus Reut.)

South Carolina. F. F. Bondy and C. F. Rainwater (October): Larger number than usual seen in Florence County.

A PENTATOMID (Chlorochroa ligata Say)

Texas. L. W. Noble (October 18): Adults were still present at Presidio and causing damage to late cotton bolls.

COTTON STAINER (Dysdercus suturellus H. S.)

Florida. C. S. Rude (October 4): Single specimen found on Caesar weed at Melbourne. Very abundant on this plant 2 years ago. Stainer was fairly numerous in cotton growing on Merritt Island, near the north end. Colony of nymphs on 1 boll in each 130 bolls.

F O R E S T A N D S H A D E - T R E E I N S E C T S

GYPSY MOTH (Porthetria dispar L.)

New Hampshire. A. F. Burgess (October 14): From September 29 to October 4 examination was made of the tree growth at several points in areas north of Lake Winnipesaukee in and near Moultonboro. Favored food plants in large woodland areas in this vicinity have been severely defoliated one or more times during the last 10 or 12 years. Latest defoliations occurred during the summers of 1940 and 1941 when many of the oaks were from 50- to 100-percent defoliated. Examination of oak shows some already dead and others dying. The oak over much of a trail, approximately 1 3/4 miles long to the top of a hill with an elevation of over 2,000 feet, was found to have suffered severely. In some places from 25 to 50 percent of it is dead and in some instances there are pockets where the mortality is complete. Old and new egg clusters are abundant from the base to the top of the hill.

Vermont. A. F. Burgess (October 6): Scouting crew in Salisbury Township, Addison County, recently found a woodland infestation in a stand of mixed hardwoods. Only three new egg clusters were found.

Massachusetts. A. F. Burgess (October 14): Infestation covering approximately 30 acres has been found in Richmond Township, Berkshire County.

FALL WEBWORM (Hyphantria cunea Drury)

Mississippi. C. Lyle, et al. (October 24): Light damage was reported to pecan and hickory in Alcorn County and to pecan in Monroe County. No late colonies have been observed in Choctaw and Oktibbeha Counties.

Texas. W. C. Maxwell (October 25): Light infestation present on mulberry in Robstown. Appears to be the third distinct brood this year.

BAGWORM (Thyridopteryx ephemeraeformis Haw.)

Mississippi. L. J. Goodgame (October 24): Caused some damage to arborvitae in Alcorn and Monroe Counties.

Kansas. H. R. Bryson (October 23): Reported as abundant at Bronson.

Oklahoma. F. A. Fenton (October 23): Reported from Seminole and Drumright.

Texas. R. K. Fletcher (October 21): Reported from Canyon on October 9. One of the most important pests of evergreen ornamentals in the State.

WALKINGSTICK (Diapheromera femorata Say)

Minnesota. A. G. Ruggles and assistants (October 10): Still numerous in the north end of Wadena County.

ASH

AN ASH FLOWER GALL (Eriophyes fraxiniflora Felt)

Nebraska. H. D. Tate (October 21): Infested ash twigs received from Cedar County on October 5.

CARPENTER WORM (Prionoxystus robiniae Peck)

Texas. W. C. Maxwell (October 25): Many young ash trees in Robstown have been severely damaged.

BEECH

A WOOLLY APHID (Phyllaphis fagi L.)

Michigan. R. Hutson (October 25): Colony was discovered along river bank on Michigan State Campus at East Lansing during the week.

BIRCH

BIRCH SKELETONIZER (Bucculatrix canadensisella Chamb.)

Maine. J. V. Schaffner, Jr. (October 27): Caused widespread browning of white birch foliage in vicinity of Eustis and Jim Pond.

New Hampshire. J. V. Schaffner, Jr. (October 27): Prevalent on white birch in the vicinity of Stark, Coos County.

BIRCH LEAF-MINING SAWFLY (Phyllotoma nemorata Fall.)

Maine. J. V. Schaffner, Jr. (October 27): Prevalent on white birch on Route 3 from Ellsworth to Bar Harbor and on Route 1 from Ellsworth to Franklin, in Hancock County, during September. Lighter infestations noted on Route 9, east of Beddington.

ELM

LARGER ELM LEAF BEETLE (Monocesta coryli Say)

Mississippi. C. Lyle, et al. (October 24): Specimens received from Jones and Lauderdale Counties, where Japanese elm, pecan, and native elm had been injured.

ELM SCURFY SCALE (Chionaspis americana Johns.)

Delaware. E. P. Felt (October 22): Extremely abundant on elms at Horn Point.

FIR

A WEEVIL (Thricolepis inornata Horn)

Arizona. H. Krauch (October 17): Specimen was observed defoliating terminal leaders of young growth on Douglas fir saplings in the Apache National Forest. Considerable damage noticed, but only one beetle was found at time of observations, in last week of August. (Det. by L. L. Buchanan.)

HACKBERRY

A HACKBERRY BLISTER GALL (Pachypsylla celtidis vesiculum Crawf.)

Pennsylvania. E. J. Udine (October 6): Very abundant on hackberry on campus at Carlisle, ranging from 5 to 10 per square inch on wooden pillars.

LOCUST

LOCUST TWIG BORER (Ecdytolopha insiticiana Zell.)

Maryland. O. O. Thomen (October 24): Specimens of injured pink locust stem and leaves collected at Silver Spring. (Det. by C. Heinrich.)

Mississippi. C. Lyle (October 24): Injured about one-third of the black locust trees in a nursery at Mississippi State College.

LOCUST BORER (Cyllene robiniae Forst.)

Indiana. J. J. Davis (October 21): Reported from a number of localities.

MAPLE

PIGEON TREMEX (Tremex columba L.)

Rhode Island. B. Eddy (October 27): Infested sugar maple in Providence.

NORWAY MAPLE APHID (Periphyllus lyropictus Kess.)

Utah. G. F. Knowlton (October 10): Moderately abundant on Norway maple at Brigham.

WOOLLY MAPLE LEAF SCALE (Phenacoccus acericola King)

Rhode Island. B. Eddy (September 23): Present and causing considerable damage on branches and leaves of several sugar and red maples in Lincoln.

OAK

ORANGE-STRIPED OAK WORM (Anisota senatoria A. & S.)

Rhode Island and Connecticut. J. V. Schaffner, Jr. (October 27): Stripping of scrub, scarlet, and black oak is noticeable between Westerly, R. I., and Old Lyme, Conn.

Mississippi. T. F. McGehee (October 24): Larvae, probably belonging to this species, have stripped almost all of the foliage from an oak tree in Harrison County.

LEAF GALLS (Neuroterus spp.)

General. E. P. Felt (October 22): N. minutus Bass. has been exceptionally abundant in the Northeastern States, and in some places has caused extensive reduction in leaf development.

Indiana. J. A. Hyslop (October 28): Specimens of N. laurifoliae Ashm. were collected at Terre Haute. (Det. by A. B. Gahan.)

EUROPEAN PINE SHOOT MOTH (Rhyacionia buoliana Schiff.)

General. J. V. Schaffner, Jr. (October 27): Infestations have been increasing during the last 3 years in older portions of infested areas of Connecticut, New York, and New Jersey, owing to absence of abnormally low winter temperatures. Red pines have been severely infested at Brockton, Mass., and in the vicinity of Dover, N. Y.

NANTUCKET PINE SHOOT MOTH (Rhyacionia frustrana Comst.)

Nebraska. H. D. Tate (October 21): Reported as causing severe damage to young windbreak plantings of ponderosa pine in western Nebraska.

PINE BEETLES (Dendroctonus spp.)

Georgia. O. I. Snapp (October 23): D. frontalis Zimm. has attacked ornamental pine trees on a farm near Fort Valley in central Georgia and has killed parts of the trees.

Utah. G. F. Knowlton (October 21): Dendroctonus spp. are damaging lodgepole pines in the Wasatch and Ashley National Forests, and yellow pine in the Powell and Dixie Forests.

WHITE-PINE WEEVIL (Pissodes strobi Peck)

New England. J. V. Schaffner, Jr. (October 27): Reported that there was a considerable reduction, as compared with 1940, in the number of attacks on white pine leaders throughout New England and New York, approximately 40 percent being attacked in some cases. Six infested red pine leaders were observed in a 9-year-old plantation of mixed red and white pine, where only 8 percent of the white pine has been attacked in 1941.

A WEEVIL (Hylobius radicis Buch.)

Massachusetts. J. V. Schaffner, Jr. (October 27): Infestation still persists in a plantation of Corsican and Scotch pine on a watershed in Weston, which was first noticed to be infested after the hurricane of September 1938 had broken over many of the trees. Adult feeding scars are very noticeable on many of the small branches, and the root crowns of most trees are badly damaged. Each year since 1938 a few trees have died and were removed.

A SCOLYTID (Pityophthorus ramiperdi Swaine)

Maine. A. E. Brower (October 1-5): Reported as injuring several large ornamental white pines at Bar Harbor.

PINE SAWFLIES (Neodiprion spp.)

Virginia. L. A. Hetrick (October 9): Adults of N. americanum Leach are emerging in parts of King William and King and Queen Counties. Earlier than usual, but heavy emergence has not yet taken place. Overwintered eggs are being deposited into the sides of the pine needles. (October 16): Second-generation larvae of N. lecontei Fitch were feeding on seedling loblolly pines in a forest-tree nursery at West Point. Most larvae were in fifth instar.

Georgia. T. L. Bissell (October 1): Larvae of N. lecontei found in clusters on young pine trees at Doerun, Colquitt County.

PINE NEEDLE SCALE (Chionaspis pinifoliae Fitch)

Indiana. J. J. Davis (October 22): Reported as abundant from many places in the State.

Utah. G. F. Knowlton (October 22): Attacking Austrian pine and spruce at Logan.

POPLAR

TULIPTREE SCALE (Toumeyella liriodendri Gmel.)

Tennessee. G. M. Bentley (September 23): High infestation present on terminal twigs of yellow poplar. Injury is general from Chattanooga to Bristol. First appearance of injury. (Det. by H. Morrison.)

SPRUCE

EUROPEAN SPRUCE SAWFLY (Gilpinia polytoma Htg.)

New England. P. B. Dowden (October 27): Reported that there has been practically no defoliation by this insect in southern New Hampshire and southern Vermont. Larval disease has been reported as common in the northern part of Maine with a consequent reduction in infestation. In

eastern Maine the infestation is generally light to modium, and in the central and western parts of the State there have been moderate increases in infestation at a number of points. Moderate infestations persist in some of the old-growth stands, notably Cornell Mountain, in the Catskills of New York; Green Peak and Mount Equinox, in southern Vermont; and the Scott's Bog area of Pittsburg, in northern New Hampshire. Infestation of Deer Mountain, in Pittsburg area, N. H., has decreased noticeably since last year. Light infestation also persists in a number of plantations in New York State.

Vermont. H. L. Bailey (October): Fall-scouting inspections show very light infestation in northern Vermont sections. No complete defoliation, with an occasional tree showing feeding.

YELLOW-HEADED SPRUCE SAWFLY (Pikonema alaskensis Roh.)

New Hampshire. J. V. Schaffner, Jr. (October 27): Defoliated the new growth on some ornamental spruce trees on a camp ground in the White Mountain National Forest.

EASTERN SPRUCE BEETLE (Dendroctonus piceaperda Hopk.)

New Hampshire. J. V. Schaffner, Jr. (October 27): No new outbreaks were noted in 2 weeks of scouting on the White Mountain National Forest. A few infested trees were found in the Crawford Notch area, where a heavy infestation was found in 1940.

Vermont. J. V. Schaffner, Jr. (October 27): Infestations on the permanent sample strip on Monastery Mountain, Middlebury Gap road, showed a slight decline, 0.1 tree per acre being attacked this year as compared with 0.203 per acre in 1940.

BARK BEETLES (Ips spp.)

Virginia. L. A. Hetrick (October 17): I. calligraphus Germ. and I. grandicollis Eichh. are infesting two large Norway spruce trees in National Cemetery at Seven Pines.

I N S E C T S A F F E C T I N G G R E E N H O U S E A N D O R N A M E N T A L P L A N T S

STALK BORER (Papaipema nebris nitela Guen.)

Indiana. J. J. Davis (October 22): Reported from several places in northern Indiana as abundant early in September. Phlox was commonly reported as the host plant.

A SOD WEBWORM (Crambus sperryellus Klots.)

California. C. K. Fisher (September 6): Adults collected at porch light. Appears to be species commonly seen flying low over lawns in the evening or resting near porch lights in Fresno, and its larvae are probably

responsible, in part at least, for damage to newly established lawns in this area. (Det. by C. Heinrich.)

TWIG GIRDLER (Oncideres cingulata Say)

Florida. J. R. Watson (October 22): Damage to cajeput trees was reported from Dunedin and Sarasota.

WHITEFLIES (Aleyrodidae)

Mississippi. G. R. Swank and E. M. Livingstone (October 15): Caused considerable damage to viburnum in Gulfport during the summer.

Louisiana. E. M. Livingstone (October 15): Less abundant on ornamentals in New Orleans this summer than in 1940.

SCALE INSECTS (Coccidae)

Virginia. C. R. Willey (October): Lepidosaphes ulmi L. and Chionaspis furfura Fitch have been observed to build up very materially this season.

South Carolina. J. A. Berly (September 26): The cottony cushion scale (Icerya purchasi Mask.) sufficiently abundant on Pittosporum at Moultrieville to require control measures.

Georgia. T. L. Bissell (October 22): The grape mealybug (Pseudococcus maritimus Ehrh.) found on stems of Chanaecrista spp., just below the ground, on September 22 and October 9. (Det. by G. F. Ferris.)

October 21): The fern scale (Pinnaspis aspidistrae Sign.) is infesting and killing some potted African violet plants at Experiment. (Det. by H. S. McConnell.)

Indiana. J. J. Davis (October 22): The oystershell scale (Lepidosaphes ulmi L.) is destructively abundant on peony and myrtle in the southern half of the State.

AZALEA

AZALEA LEAF MINER (Gracilaria azaleella Brants)

Louisiana. E. M. Livingstone (October 15): Less abundant in New Orleans this season than in 1940.

AZALEA SCALE (Eriococcus azaleae Comst.)

Mississippi. C. Lyle (October 24): Specimens were recently received from Harrison and Lincoln Counties.

CHRYSANTHEMUM

COCKLEBUR BILLBUG (Rhodobaenus tredecimpunctatus Ill.)

Indiana. J. J. Davis (October 22): Reported as burrowing in the terminal bud shoots of chrysanthemums in a greenhouse at Bedford on August 20. Adult was reared on September 18.

DAHLIA

TARNISHED PLANT BUG (Lygus pratensis oblineatus Say)

Rhode Island. B. Eddy (October 6): Blasted dahlia buds in Pawtucket.

EUONYMUS

EUONYMUS SCALE (Chionaspis euonymi Comst.)

Maryland. R. Morris (September 8): Present at Leonardtown. (Det. by G. S. Langford.)

Mississippi. C. Lyle, et al. (October 24): Heavy infestations were reported on euonymus plants in the Meridian district and in Monroe County where some plants had been killed.

GLADIOLUS

GLADIOLUS THRIPS (Taeniothrips simplex Morison)

Georgia. T. L. Bissell (October 1): Scarce on late-flowering stalks in a large planting.

Tennessee. G. M. Bentley (October 20): Comparatively few found on gladiolus, with exception of a heavy infestation at Crossville, in Cumberland County, in a 40-acre field devoted to the growing of different varieties.

Utah. G. F. Knowlton (October 18): No severe damage generally in most northern gardens examined.

IRIS

IRIS BORER (Macronoctua onusta Grote)

Maine. A. E. Brower (September 15-30): Several moths were taken at light at Augusta.

JUNIPER

JUNIPER WEBWORM (Dichomeris marginellus F.)

Maryland. E. N. Cory (September 20): Very destructive in Montgomery County.

MAGNOLIA

A SCALE (Toumeyella turgida Ckll.)

Mississippi. C. Lyle (October 24): Specimens on magnolia were received from Harrison County on October 7.

OLEANDER

BLACK SCALE (Saissetia oleae Bern.)

South Carolina. G. A. Berly (September 26): Rather heavily infesting a few oleander plants in the Moultrieville area.

PYRACANTHA

LEAF CRUMPLER (Mineola indigenella Zell.)

Texas. R. K. Fletcher (October 21): Reported causing widespread injury to pyracantha, most reports being received from southeastern part of State. Reported from Port Arthur on October 1.

REDBUD

SOFT SCALE (Coccus hesperidum L.)

Virginia. C. R. Willey (October): Found for first time on redbud, in a nursery, in September.

SUNFLOWER

SUNFLOWER MAGGOT (Straussia longipennis Wied.)

Utah. G. F. Knowlton (September 30): Reported as destroying seeds in sunflower heads at Lehi.

TAXUS

A MEALYBUG (Pseudococcus cuspidatae Rau)

Michigan. R. Hutson (October 25): Specimen on Taxus was received from Detroit.

INSECTS ATTACKING MAN AND DOMESTIC ANIMALS

MAN

MOSQUITOES (Culicinae)

Missouri. L. Haseman (October 25): An undetermined common species has been abundant during the month throughout central Missouri, and is still attacking livestock and man.

North Dakota. H. S. Telford and C. Wester (October 23): Anopheles maculipennis Meig. present in great numbers a few miles south of Grand Forks. On September 20 this species, together with A. punctipennis Say, was found in buildings at Hillsboro.

Utah. G. F. Knowlton (October 13): Mosquitoes observed entering buildings at Salt Lake, Logan, and Ogden.

FLEAS (Siphonaptera)

Indiana. J. J. Davis (October 22): Reported as numereus around farm buildings.

Georgia. O. I. Snapp (October 20): Unusually abundant in Fort Valley, central Georgia.

BEDBUG (Cimex lectularius L.)

Nebraska. H. D. Tate (October 21): Reported from Saunders County on October 9.

Utah. G. F. Knowlton (October 15): Heavy outbreak is infesting a residence in Ogden.

FLIES (Diptera)

Texas. H. M. Brundrett (October 28): Phlebotomus sp. was especially annoying early in the summer and again in September. Reported as numerous and causing irritation, accompanied by violent itching and slight swelling.

Washington. E. F. Knipling (August 7): Symphoromyia sp. flies were rather numerous and inflicted a painful bite. Specimens were taken around Mirror Lake.

BROWN DOG TICK (Rhipicephalus sanguineus Latr.)

Kansas. H. R. Bryson (October 23): Reported twice from Kansas City.

Texas. H. M. Brundrett (October 28): One infestation was noted in which dogs were heavily covered with ticks of different sizes.

BLACK WIDOW SPIDER (Latrodectus mactans F.)

Indiana. J. J. Davis (October 22): Reported frequently from southern part of State.

Nebraska. H. D. Tate (October 21): Reported from Kearney, Polk, Buffalo, Merrick, and York Counties during the period from September 16 to October 20, inclusive.

Utah. G. F. Knowlton (October 22): Several reported as being collected at Logan and Salt Lake City.

CATTLE

SCREWWORM (Cochliomyia americana C. & P.)

Indiana. J. J. Davis (October 22): Reported as more prevalent during the latter half of September than for the last 20 years. Conspicuous and destructive outbreaks reported from North Salem, New Harmony, Bringhurst, La Fayette, Anderson, Tipton, and Kokomo.

O. B. Riggs (October 27): Reported as causing severe damage during September and October to all kinds of livestock in Posey County, including horses, mules, cattle, hogs, sheep, and dogs, with greatest infestations on cattle.

F. C. Bishopp (October): Outbreak reported as having occurred in western end of Howard County.

Illinois. B. G. Berger (October 21): Many cases of infestation reported from south and east of Vermilion, in Edgar County, from the end of August until the first of October.

Mississippi. H. L. Dourlass and F. A. Smith (October 24): Reported as very abundant in Tate, Panola, Grenada, and Yalobusha Counties with lighter infestations in De Soto, Lafayette, Marshall, Quitman, and Tunica Counties.

F. C. Bishopp (October 15 and 16): Reported as troublesome during the last 2 months in Hernando and Grenada.

Texas. W. C. Maxwell (October 25): Reported as very severe on cattle in Kleberg County on September 30.

HORN FLY (Haematobia irritans L.)

Texas. H. M. Brundrett (September): Reappeared about September 1 around Uvalde after being absent during midsummer and late summer. Average estimate was about 3,000 per animal.

COMMON CATTLE GRUB (Hypoderma lineatum DeVill.)

Texas. H. M. Brundrett (October 28): Noticed in small stages in backs of cattle at Uvalde during the latter part of September, averaging about 20 grubs per 100 cattle in 1 herd.

HORSE

HORSEFLIES (Tabanus spp.)

Texas. H. M. Brundrett and W. L. Barrett (October 28): One infestation of horseflies was noted. No unusual numbers observed.

F. C. Bishopp (October 28): Continued observations have not resulted in the finding of any oviposition by T. abactor Phil.

BOTFLIES (Gasterophilus spp.)

Missouri. L. Haseman (October 25): Common botfly has been observed depositing eggs on horses in central Missouri since early in October.

Texas. H. M. Brundrett (October 28): Adult botflies have been active during September around Uvalde and several horses were observed to be fairly well covered with eggs. Reported as annoying in some cases.

POULTRY

CHICKEN MITE (Dermanyssus gallinae Deg.)

Rhode Island. B. Eddy (October 7): Heavily infested chicken house in East Greenwich.

New York. F. C. Bishopp (October 14): Several specimens were submitted from an apartment house in New York City.

CHICKEN BODY LOUSE (Eomenacanthus stramineus Nitz.)

Rhode Island. B. Eddy (October 7): Heavily infested poultry houses in East Greenwich.

H O U S E H O L D A N D S T O R E D - P R O D U C T S I N S E C T S

TERMITES (Isoptera)

Rhode Island. B. Eddy (October 6): Reticulitermes flavipes Koll. found infesting a building at Cranston.

Kansas. H. R. Bryson (October 23): Termites reported as present in Partridge, Chanute, Arkansas City, Lyndon, Phillipsburg, Meriden, Topeka, and Pretty Prairie.

California. P. Simmons (October 27): Winged forms of R. tibialis Banks emerging today in laboratory at Fresno, following a rain. Last emergence from same galleries was on December 16, 1940.

ANTS (Formicidae)

New York. Anne McElroy (October 6): Specimens of Monomorium pharaonis L. were sent in on October 2 from Brooklyn. Reported as attacking various foods.

Illinois. C. L. Metcalf (October 23): Crematogaster lineolata Say infested a residence at Decatur early in October.

Mississippi. C. Lyle, et al. (October 24): Specimens of fire ants (Solenopsis xyloni McCook) were received from Harrison County on September 29, and specimens of M. pharaonis from Harrison and Lowndes Counties and from counties along the Gulf coast. Specimens of the Argentine ant (Iridomyrmex humilis Mayr) were received from Gloster in Amite County, which was not previously known to be infested; also reported as annoying in Pike and other counties in the southwestern part of the State.

Louisiana. E. M. Livingstone (October 15): I. humilis was persistent in and around greenhouses during September.

Nebraska. H. D. Tate (October 21): Specimens of C. lineolata were received from Otoe County on September 17.

BOXELDER BUG (Leptocoris trivittatus Say)

Pennsylvania. E. J. Udine (October 6): Reported as numerous from Carlisle during the latter part of September and to date.

New Jersey. W. E. Rogers (October 21): Heavy infestation noted around a house at Bound Brook.

F. A. Soraci (October 24): Reported as abundant on boxelder around Trenton and in the southern half of the State.

Delaware. L. A. Stearns (August 30): Reported as abundant in houses at Hockessin on August 30, and at Newark, Laurel, Middletown, and Delmar in October.

E. P. Felt (October 22): Reported as abundant in Wilmington area.

Maryland. C. Fuller (October 18): Boxelder trees at Cambridge rather heavily infested.

Virginia. L. A. Hetrick (October 20): Specimens of nymphs and adults sent in, taken from an infested boxelder tree at Charlottesville.

C. R. Willey (October): Very abundant over the State.

Ohio. T. H. Parks (October 25): Reported as present on ash trees and boxelders and as entering houses.

E. W. Mendenhall (October 21): Nuisance in lawn and about a house at Portsmouth.

Indiana. J. J. Davis (October 22): Reported as annoying from every section of the State.

Illinois. C. L. Metcalf (October 23): Reported on October 15 as annoying about dwellings in McHenry and Grundy Counties, in northeastern Illinois.

Michigan. R. Hutson (October 25): Reported as infesting houses and lawns at Ypsilanti, Grand Rapids, Wyandotte, Jackson, and Vassar.

Missouri. W. R. Enns (October 25): Reported as unusually abundant throughout central Missouri and from other parts of the State, and moving from boxelder into their winter quarters.

Nebraska. H. D. Tate (October 21): Reported numerous times from Boone, Burt, Cherry, Fillmore, Franklin, Frontier, Gage, Johnson, and Pawnee Counties. Reports and observations indicate that it is more numerous in the eastern part of State than at any time in recent years.

Kansas. H. R. Bryson (October 24): More abundant than for the last 5 or 6 years. Reported as abundant from Norton, Concordia, and Manhattan.

Utah. G. F. Knowlton (October 2): Becoming more annoying in houses in northern Utah.

STRAWBERRY ROOT WEEVIL (Brachyrhinus ovatus L.)

Michigan. R. Hutson (October 25): Reported as infesting houses in Alma, Manistee, and Detroit.

Alaska. A. Rasmussen (September 29): Reported as very numerous in newly built house at Skagway, which was unoccupied for 6 weeks during the summer. (Det. by L. L. Buchanan.)

A CLOTHES MOTH (Tineola walsinghami Busck)

Florida. Mrs. L. S. Churchill (October 30): Present in house at Dade City and feeding on carpets, rugs, and clothing. (Det. by C. Heinrich.)

Mississippi. C. Lyle, et al. (October 24): Specimens received from Jones and Harrison Counties (det. by C. Heinrich) and from Woodland, in Chickasaw County.

POWDER-POST BEETLES (Lyctidae)

Maine. A. E. Brower (October 13): Heavy infestation examined in hand-hewn beams supporting an old house in Vassalboro. Other infestations have been reported.

BROWN-BANDED COCKROACH (Supella supellectilium Serv.)

Minnesota. C. E. Mickel (October 21): First report for the State received from Lester Prairie.

GERMAN COCKROACH (Blattella germanica L.)

Mississippi. C. Lyle, et al. (October 24): Specimens received from Neshoba County on September 24. Reported as annoying in kitchen.

Nebraska. H. D. Tate (October 21): Specimens received from Clay and Richardson Counties.

BOOKLOUSE (Liposcelis divinatorius Mull.)

Illinois. C. L. Metcalf (October 23): Infested a residence in Shelby County early in September.

Michigan. Mrs. Harry Macksey (September 26): Reported as present in stored boxes, on wallpaper, and in some books at Detroit.

HOUSE CENTIPEDE (Scutigera forceps Raf.)

Nebraska. H. D. Tate (October 21): Specimens submitted from Frontier and Douglas Counties, with report that they were present in considerable numbers in basements.

A GREENBOTTLE FLY (Lucilia sericata Meig.)

Oregon. D. C. Mote (October 8): Specimens of flies reared from larvae found in can of corned beef purchased from a store in Portland. (Det. by D. G. Hall.)

CARPET BEETLES (Anthrenus spp.)

Illinois. C. L. Metcalf (October 23): Numerous full-grown larvae of A. verbasci L. reported as present in residences at Peoria, Pekin, Watseka, and La Salle.

Nebraska. H. D. Tate (October 21): A. scrophulariae L. reported from Douglas County on September 30 as doing damage to woolen clothing.

ALMOND MOTH (Ephestia cautella Walk.)

Michigan. R. Hutson (October 25): Larval forms very numerous around dairy barns in the vicinity of Hillsdale. (Det. by C. Heinrich.)

DRUG STORE WEEVIL (Stegobium paniceum L.)

Rhode Island. B. Eddy (October 2): Found in a package of soup mix in Riverside.

STORED GRAIN INSECTS

Rhode Island. B. Eddy (October 14): Saw-toothed grain beetle (Oryzaephilus surinamensis L.) infested breakfast food at Providence.

UNIVERSITY OF FLORIDA
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Delaware. J. M. Amos (October 23): Rather heavy infestation of angoumois grain moth (Sitotroga cerealella Oliv.) in unshucked corn and corn standing in the shock in Sussex County. Varieties having ears with exposed tips are more severely infested than those having shucks covering the ear. Most of the ears are clean or have only 1 to 3 infested grains, but many ears have as many as 50 grains containing larvae, pupae, or exit holes.

Virginia. H. G. Walker (October 24): S. cerealella unusually abundant in many fields of corn at harvesttime in the Norfolk area.

Georgia. O. I. Snapp (October 23): S. cerealella and O. surinamensis are attacking stored oats at Fort Valley, in central Georgia.

Tennessee. G. M. Bentley (October 7): Two rather heavy infestations of wheat by the Indian-meal moth (Plodia interpunctella Hbn.) occurred in mills at Knoxville and Morristown. Very heavy infestation of rice weevil (Sitophilus oryza L.) in warehouse at Morristown, in Hamblen County.

Mississippi. C. Lyle (October 24): S. oryza reported from Copiah and Perry Counties.

North Dakota. F. S. Telford and C. Wester (September 29): Lachesilla pedicularia L. was numerous in barley from a granary at Walcott. (October 23): Dried prunes packed in wooden boxes in a warehouse in Fargo were found on October 2 to contain severe larval infestations of P. interpunctella Hbn. Larvae were heavily parasitized.

Nebraska. H. D. Tate (October 21): Specimens of O. surinamensis were submitted, with reports that they were damaging grain products in a storeroom in Madison County and were found in barley in Butler County. Tenebrio molitor L. was found to be infesting oats in Butler County. Specimens of Tribolium castaneum Herbst. were submitted, with report that they were infesting oats in Butler County and causing damage in a feed store in Richardson County. Barley samples submitted from Hayes County were found to be infested with P. interpunctella and the cadelle (Tenebroides mauritanicus L.).

CIGARETTE BEETLE (Lasioderma serricorne F.)

Illinois. C. L. Metcalf (October 23): Serious infestations were found in houses at Urbana, in Champaign County, and at Deerfield, in Lake County, in mid-October.

Mississippi. T. F. McGehee (October 24): Adults were collected in damaged furniture in a house in Harrison County.

Nebraska. H. D. Tate (October 21): Specimens received from Douglas and Platte Counties on October 6 and 9, respectively. Reported as infesting davenport in Platte County.